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EXAMINER	
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ART UNIT	PAPER NUMBER
2167	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/821,199	GORDON ET AL.	
	Examiner	Art Unit	
	Kuen S. Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/2/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Action is responsive to Applicant's Application filed April 9, 2004. Claims 1-58 are pending.

Information Disclosure Statement

2. Information Disclosure Statements filed September 2, 2004 is considered and corresponding PTO-1449 is electronically signed and attached.

Drawings

3. The drawings, filed April 9, 2004 are considered in compliance with 37 CFR 1.81 and accepted.

Claim Objections

4.1. Applicant is advised that claims 35-36 are objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). In this case, claims 35 and 36 duplicate claim 32, respectively. Appropriate correction is required.

4.2. Applicant is advised that claims 9-10, 23, 40-41 and 54 are objected to because of the following informalities: the term "plugin(s)" appears randomly which is inconsistent with other "plug-in(s) within the same claim or with "plug-in(s)" supported by Specification. Appropriate correction is required.

4.3. Applicant is advised that claim 1 is objected to because of the following informalities: the term "realtime" appears a couple of times in claim 1 which is inconsistent with "real-time" supported by Specification. Appropriate correction is required.

Specification

5. The disclosure is objected to because of the following informalities:

5.1. The disclosure is objected to because Page 11, line 17 and Page 15, line 27 of Specification contain embedded hyperlinks and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. Appropriate correction is required.

5.2. The disclosure is objected to because Page 10, line 3 and Page 23, line 31 of Specification contain the term "plugin(s)" which is inconsistent with the term "plug-in(s)" appearing in other places in the Specification.

5.3. The disclosure is objected to because Page 10, lines 6, 8-9 and 24, and Page 11, lines 3 and 6 of Specification contain the term "realtime" which is inconsistent with the term "real-time" appearing in other places in the Specification.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6.1. Claims 4 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 4 and 35, the element "processing content corresponding to a given time period in substantially said given time period" fails to set forth a distinctive range for the processing time. Further, the claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. For further rejection of the claims under 35 USC §102 or 35 USC §103 later in this Action, Examiner interprets the element of the claims as "processing content corresponding to a given time period is in less than said given time period".

6.2. Claims 35-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per Claim 35, the claim recites the limitation "said given time period" in "processing content corresponding to a given time period in substantially said given time period". There is insufficient antecedent basis for this limitation in the claim.

As per Claim 36, the claim recites the limitation "said given time period" in "processing content corresponding to a given time period in substantially said given time period; and processing content corresponding to a given time period in less

than said given time period". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7.1. As set forth in MPEP 2106 (II) (A):

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

7.2. Claims 1-58 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

As per claim 1, the claimed invention represents a machine accessible medium providing instructions executed by a computing platform. It is noted "machine accessible medium" comprises wireless telecommunication signals and carrier waves, forms of energy. As forms of energy, the signals and waves are not a matter, composition of matter or product; and do not fall within any one of categories of patentable subject

matter. The medium is not computer readable storage and will not produce **tangible** result. Further, the result produced by the receiving and extracting steps does not convey to, for example, an end user, physical storage or display and is not a real world result. The steps are abstract because no **useful** result ensued. However, a tangible, concrete and useful result is required in a practical application test. The consequence is non-statutory. For further rejecting the claim under 35 USC §102 or 35 USC §103, Examiner interprets "machine accessible medium" as "computer readable storage medium".

As per claim 28, the claimed invention represents a system does not have any hardware for supporting the data structure designated for storing data. Also noted is the steps are intended **to** perform, and they may not be performed. The steps comprised in the system are abstract because no concrete, useful or tangible result ensued from the intentional steps. However, a tangible, concrete and useful result is required in a practical application test. The consequence is non-statutory. For further rejecting the claim under 35 USC §102 or 35 USC §103, Examiner interprets "to receive" as "receiving". Similar interpretations also hold similarly for other intentional steps.

As per claims 2-27 and 29-58, which inherit deficiency of practical application requirements of independent claims 1 and 28, respectively, and are likewise, non-statutory.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8.1. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller et al. (U.S. Patent 6,877,134, hereafter "Fuller") in view of Dimitrova et al. (U.S. Patent 6,721,488, hereafter "Dimitrova").

As per claim 1, Fuller teaches "A machine accessible medium that provides instructions, which when executed by a computing platform, cause said computing platform to perform operations" (See Fig. 4 and col. 8, lines 6-25 where a computing platform workstation performs software encoding process) comprising a method comprising:

"a) receiving content from one or more sources" (See Fig. 1 and col. 6, lines 45-49 where a number of possible analog sources are received).

Fuller does not explicitly teach that the content of one or more sources received " includes a corresponding given realtime running time length", although Fuller teaches time-coded on videotape at Fig. 6 and col. 9, lines 36-38.

However, Dimitrova teaches storing time domain data of content at col. 3, lines 34-36 and providing runtime of a storage medium content at col. 1, lines 32-36.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Dimitrova with Fuller reference by storing time domain data of a storage medium content because both references are directed to extracting and identifying medium content where Dimitrova emphasizes efficiency on medium use and operation while Fuller system operates in real-time mode, and the combined teaching of the references would have enabled Fuller's system to utilize timing information to facilitate the process of extracting metadata to build an accurate and rich frame index in a mission critical real-time operation scheme (See BACKGROUND OF THE INVENTION and SUMMARY OF THE INVENTION of the two references)..

The combined teaching of the Dimitrova and Fuller references further teaches "b) extracting metadata from said content in a period of time that is less than said corresponding given realtime running time length" (See Fuller: Fig. 6 and col. 3, lines 30-37 where metadata key frames of a multimedia content is extracted in real-time and frame extraction time is less than the content's run-time because last key frame exists before the very end of the content).

As per claim 2, the combined teaching of the Dimitrova and Fuller references further teaches the machine accessible medium according to claim 1, wherein said "content

comprises at least one of audio data, video data, still-frame data, and digital data" (See Fuller: Fig. 10 and col. 12, lines 29-34 where analog content is captured).

As per claim 3, the combined teaching of the Dimitrova and Fuller references further teaches the machine accessible medium according to claim 1, wherein said "metadata comprises **at least one of** a snapshot, a stream, a program elementary stream (PES), a track, a time code, and a scene change" (See Fuller: col. 3, lines 30-37 where time code is extracted).

As per claim 4, the combined teaching of the Dimitrova and Fuller references further teaches the machine accessible medium according to claim 1, wherein said "extracting comprises **at least one of**: processing content corresponding to a given time period in substantially said given time period; and processing content corresponding to a given time period in less than said given time period" (See Fuller: Fig. 6 and col. 3, lines 30-37 where metadata key frames of a multimedia content is extracted in real-time and frame extraction time is less than the content's run-time because last key frame exists before the very end of the content).

As per claim 5, the combined teaching of the Dimitrova and Fuller references further teaches the machine accessible medium according to claim 1, wherein said "extracting comprises: processing content by **at least one of**: parallel processing and multi-tasking"

(See Fuller: Fig. 4, col. 3, lines 38-47 and col. 8, lines 17-21 where indexing and cataloging processes proceed in parallel and encoding tasks are multi-tasks).

As per claim 6, the combined teaching of the Dimitrova and Fuller references further teaches **at least one of**:
"1) extracting to optimize for throughput; 2) extracting to optimize for speed; and 3) extracting to optimize for quality" (See Fuller: Fig. 4, col. 3, lines 38-47 and col. 8, lines 17-21 where parallel indexing and cataloging processes and multi-tasking encoding tasks are to optimize for throughput).

As per claim 7, the combined teaching of the Dimitrova and Fuller references further teaches the machine accessible medium according to claim 1, wherein said (b) comprises **at least one of**:
"1) extracting a scene change; 2) extracting a face detection; 3) extracting a face recognition; 4) extracting an optical character recognition; 5) extracting a logo detection; 6) extracting text from audio; 7) extracting a key length value; 8) extracting geospatial data; and 9) extracting a closed captioning" (See Fuller: Fig. 6, and col. 9, lines 30-38 where scene changes are extracted).

As per claim 8, the combined teaching of the Dimitrova and Fuller references further teaches "extracting said metadata in a distributed manner" (See Fuller: See Fuller: Fig.

4, col. 8, lines 6-25 where cataloger drives a set of encoder processes to perform distributed metadata extraction).

As per claim 9, the combined teaching of the Dimitrova and Fuller references further teaches **at least one of**:
"i) extracting using one or more plugins; ii) extracting using multiple streams on a server; iii) extracting using multiple streams on more than one server; iv) extracting using said one or more plugins on a server; and v) extracting using said one or more plugins on more than one server" (See Fuller: Fuller: See Fuller: Fig. 4, col. 8, lines 6-25 where cataloger drives a set of encoder processes to extract by using multiple streams on more than one workstations).

As per claim 10, the combined teaching of the Dimitrova and Fuller references further teaches "A) extracting using said one or more plug-ins, wherein said one or more plugins are of one or more configurations" (See Fuller: Fig. 11, col. 12, lines 18-21 and col. 13, lines 25-32 where plug-in is available for time code extraction and each data representation for each of the plug-ins is installed).

As per claim 11, the combined teaching of the Dimitrova and Fuller references further teaches "1) extracting said metadata using deterministic analysis" (See Fuller: col. 18, lines 8-15 where content analysis machine accesses content to extract and time code metadata to ensure metadata is synchronize with digital content).

As per claim 12, the combined teaching of the Dimitrova and Fuller references further teaches **at least one of**:
"i) extracting said metadata to achieve repeatable results; ii) extracting said metadata to analyze all frames; iii) extracting said metadata to achieve no data loss; and iv) extracting said metadata to achieve no lost frames" (See Fuller: col. 18, lines 8-15 where content analysis machine accesses content to extract and time code metadata to ensure metadata is synchronize with digital content for all frames).

As per claim 13, the combined teaching of the Dimitrova and Fuller references further teaches "1) receiving external stream information" (See Fuller: col. 7, line 65 – col. 8, line2 where cataloger receives video information from digital source); and
"2) processing decisions based on said external stream information" (See Fuller: col. 8, lines 17-25 where cataloger drives encoders based on possible encoding scenarios).

As per claim 14, the combined teaching of the Dimitrova and Fuller references further teaches "external stream information includes **at least one of** size, resolution, encoding type, encoding parameters, frame rate, and data rate" (See Fuller: Fuller: col. 7, line 65 – col. 8, line2 and col. 8, lines 17-25 where cataloger receives video information from digital source and cataloger drives encoders based on possible encoding scenarios).

As per claim 15, the combined teaching of the Dimitrova and Fuller references further teaches **at least one of**: "1) identifying objects; and 2) identifying motion tracking of said objects" (See Fuller: Fig. 7 and col. 10, lines 2-19 where metadata track index manager manages metadata index and tracks objects).

As per claim 16, the combined teaching of the Dimitrova and Fuller references further teaches **at least one of**:
"1) managing resources using load balancing; 2) managing resources using load balancing with a central registry; and 3) managing resources using fault tolerance methods" (See Fuller: col. 3, lines 20-37 where indexing and distributing of video across an enterprise is a pervasive and fault.tolerant video solution).

As per claim 17, the combined teaching of the Dimitrova and Fuller references further teaches **at least one of**:
"1) configuring a content processing engine; 2) reconfiguring said content processing engine; and 3) reconfiguring said content processing engine in real-time" (See Fuller: Fig. 3 and col. 7, lines 30-41 where cataloger is configured with protocol translator).

As per claim 18, the combined teaching of the Dimitrova and Fuller references further teaches "c) storing said metadata" (See Fuller: col. 18, lines 32-34 where metadata may require separate storage).

As per claim 19, the combined teaching of the Dimitrova and Fuller references further teaches "c) managing assets wherein said assets include **at least one of** said content and said metadata" (See col. 3, lines 20-37 where indexing and distributing of video across an enterprise is a pervasive and fault tolerant video assets of content and its metadata).

As per claim 20, the combined teaching of the Dimitrova and Fuller references further teaches **at least one of**: "1) receiving a search query; 2) displaying results of said search query; and 3) creating products from said results" (See Fuller: Fig. 17 and col. 16, lines 49-53 where extracted metadata output in HTML form is displayed).

As per claim 21, the combined teaching of the Dimitrova and Fuller references further teaches "i) receiving a search query based on query terms" (See Fuller: col. 3, lines 58-67 where metadata of content is extracted for downstream applications, including search and browse).

As per claim 22, the combined teaching of the Dimitrova and Fuller references further teaches "a content processing engine, wherein said content processing engine is platform independent and written in an extensible object oriented programming language" (See Fuller: col. 3, lines 55-61 where content analysis engines are available from third parties within an extensible metadata engine framework).

As per claim 23, the combined teaching of the Dimitrova and Fuller references further teaches **at least one of**:

"1) correlating results of said data extractions intelligently from multiple input streams; 2) running multiple instances of said engine concurrently; 3) performing triggered event processing; and 4) maintaining a central registry listing availability and location of plugins" (See Fuller: Fig. 6 and col. 9, lines 30-38 where a set of key frames are intelligently extracted).

As per claim 24, the combined teaching of the Dimitrova and Fuller references further teaches scripted language comprises **at least one of**:

"1) an extensible markup language; 2) an embedded language; 3) a command line based language; and 4) event handling via said scripting language" (See Fuller: col. 6, lines 50-56 where metadata server contains HTML files for supporting media management).

As per claim 25, the combined teaching of the Dimitrova and Fuller references further teaches "c) displaying said metadata via an user interface" (See Fig. 17 and col. 16, lines 49-53 where extracted metadata output in HTML form is displayed using client browser, an user interface).

As per claim 26, the combined teaching of the Dimitrova and Fuller references further teaches clipping said content comprising **at least one of**:

"1) segmenting said content; and 2) marking a beginning and an ending of a plurality of key frames" (See Fuller: col. 3, lines 34-37 where any segment of medium content is accessed via frame accurate-index of metadata).

As per claim 27, the combined teaching of the Dimitrova and Fuller references further teaches the machine accessible medium according to claim 1, "wherein said content is **at least one of** intelligence industry content, law enforcement industry content, broadcast studio content, media asset management content, media and entertainment content, homeland defense content, distance learning content, security content, and business intelligence content" (See col. 3, lines 48-52 where multimedia cataloger accesses and distributes media for distance learning content).

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

9.1. A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9.2. Claims 28-58 are rejected under 35 U.S.C. 102(e) as anticipated by Fuller et al. (U.S. Patent 6,877,134, hereafter "Fuller").

As per claim 28, Fuller teaches "A system to extract metadata" (See col. 3, lines 30-37 where metadata of a medium content is extracted) comprising:

"one or more tasks to receive at least one file of content, wherein said one or more tasks process said at least one file of content and extract metadata of one or more types" (See Fig. 4, col. 8, lines 42-58 and col. 7, lines 50-54 where medium content is fed to cataloger and encoder processes and encoders are utilized simultaneously and content source includes digital disk recorder);

"one or more data sinks to filter said metadata based on said one or more types" (See Figs. 16-17 and col. 16, lines 49-67 where metadata filter file is filtered based on key frame, clip, text and etc.); and

"a database to store said metadata, wherein said metadata is extracted in a period of time that is less than a running length of said content" (See Fig. 1, col. 6, lines 50-54 where relational database is implemented to store metadata, and at Fig. 6 and col. 3, lines 30-37 where metadata key frames of a multimedia content is extracted in real-time and frame extraction time is less than the content's run-time because last key frame exists before the very end of the content).

As per claim 29, Fuller further teaches one or more tasks comprises **at least one of**:

"an audio task to extract metadata about audio information from said content file; a key frame task to extract metadata about one or more key frames in said content file; a real producer task to extract metadata into real media format from said content file; a synchronized multimedia integration language task to extract metadata from said

content file; and a mixed excitation linear predictive encoder task to extract metadata from said content file" (See Fig. 6, and col. 9, lines 30-38 where scene changes are extracted).

As per claim 30, Fuller further teaches the system of claim 28, wherein said one or more components comprises **at least one of**:
"a directory watcher to monitor one or more directories for said content file; a scheduler to determine the processing operations or each of said one or more tasks; and a task manager to line-up one or more plug-ins and allocate resources for said one or more tasks" (See col. 8, lines 53-63 where cataloger issues commands to encoders for initiating encoding processes).

As per claim 31, Fuller further teaches the system of claim 28, further comprising:
"one or more database tools coupled to said database, wherein said one or more database tools view, produce and deliver reports, and query said database" (See Fig. 1, col. 6, lines 50-54 and col. 3, lines 58-67 where relational database is implemented to store metadata, and metadata of content is extracted for downstream applications, including search and browse).

As per claim 32, Fuller further teaches "A method of processing metadata comprising:
"a) receiving content from one or more sources" (See Fig. 1 and col. 6, lines 45-49 where a number of possible analog sources are received); and

"b) extracting metadata from said content faster than real-time" (See Fig. 6 and col. 3, lines 30-37 where metadata key frames of a multimedia content is extracted in real-time and frame extraction time is less than the content's run-time because last key frame exists before the very end of the content).

As per claim 33, Fuller further teaches "content comprises at least one of audio data, video data, still-frame data, and digital data" (See Fuller: Fig. 10 and col. 12, lines 29-34 where analog content is captured).

As per claim 34, Fuller further teaches "metadata comprises **at least one of** a snapshot, a stream, a program elementary stream (PES), a track, a time code, and a scene change" (See Fuller: col. 3, lines 30-37 where time code is extracted).

As per claim 35, Fuller further teaches the method according to claim 32, wherein said extracting in faster than real-time comprises:
"processing content corresponding to a given time period in substantially said given time period" (See Fuller: Fig. 6 and col. 3, lines 30-37 where metadata key frames of a multimedia content is extracted in real-time and frame extraction time is less than the content's run-time because last key frame exists before the very end of the content).

As per claim 36, Fuller further teaches "extracting comprises **at least one of**: processing content corresponding to a given time period in substantially said given time

period; and processing content corresponding to a given time period in less than said given time period" (See Fuller: Fig. 6 and col. 3, lines 30-37 where metadata key frames of a multimedia content is extracted in real-time and frame extraction time is less than the content's run-time because last key frame exists before the very end of the content).

As per claim 37, Fuller further teaches **at least one of**:

"1) extracting to optimize for throughput; 2) extracting to optimize for speed; and 3) extracting to optimize for quality" (See Fuller: Fig. 4, col. 3, lines 38-47 and col. 8, lines 17-21 where parallel indexing and cataloging processes and multi-tasking encoding tasks are to optimize for throughput).

As per claim 38, Fuller further teaches **at least one of**:

"1) extracting a scene change; 2) extracting a face detection; 3) extracting a face recognition; 4) extracting an optical character recognition; 5) extracting a logo detection; 6) extracting text from audio; 7) extracting a key length value; 8) extracting geospatial data; and 9) extracting a closed captioning" (See Fuller: Fuller: Fig. 6, and col. 9, lines 30-38 where scene changes are extracted).

As per claim 39, Fuller further teaches "extracting said metadata in a distributed manner" (See Fuller: See Fuller: Fig. 4, col. 8, lines 6-25 where cataloger drives a set of encoder processes to perform distributed metadata extraction).

As per claim 40, Fuller further teaches **at least one of**:

"i) extracting using one or more plugins; ii) extracting using multiple streams on a server; iii) extracting using multiple streams on more than one server; iv) extracting using said one or more plugins on a server; and v) extracting using said one or more plugins on more than one server" (See Fuller: Fuller: See Fuller: Fig. 4, col. 8, lines 6-25 where cataloger drives a set of encoder processes to extract by using multiple streams on more than one workstations).

As per claim 41, Fuller further teaches "A) extracting using said one or more plug-ins, wherein said one or more plugins are of one or more configurations" (See Fuller: Fig. 11, col. 12, lines 18-21 and col. 13, lines 25-32 where plug-in is available for time code extraction and each data representation for each of the plug-ins is installed).

As per claim 42, Fuller further teaches "1) extracting said metadata using deterministic analysis" (See Fuller: col. 18, lines 8-15 where content analysis machine accesses content to extract and time code metadata to ensure metadata is synchronize with digital content).

As per claim 43, Fuller further teaches **at least one of**:

"i) extracting said metadata to achieve repeatable results; ii) extracting said metadata to analyze all frames; iii) extracting said metadata to achieve no data loss; and iv) extracting said metadata to achieve no lost frames" (See Fuller: col. 18, lines 8-15

where content analysis machine accesses content to extract and time code metadata to ensure metadata is synchronize with digital content for all frames).

As per claim 44, Fuller further teaches "1) receiving external stream information" (See col. 7, line 65 – col. 8, line2 where cataloger receives video information from digital source); and

"2) processing decisions based on said external stream information" (See Fuller: col. 8, lines 17-25 where cataloger drives encoders based on possible encoding scenarios).

As per claim 45, Fuller further teaches "external stream information includes **at least one of** size, resolution, encoding type, encoding parameters, frame rate, and data rate" (See Fuller: Fuller: col. 7, line 65 – col. 8, line2 and col. 8, lines 17-25 where cataloger receives video information from digital source and cataloger drives encoders based on possible encoding scenarios).

As per claim 46, Fuller further teaches **at least one of**: "1) identifying objects; and 2) identifying motion tracking of said objects" (See Fuller: Fig. 7 and col. 10, lines 2-19 where metadata track index manager manages metadata index and tracks objects).

As per claim 47, Fuller further teaches **at least one of**:

"1) managing resources using load balancing; 2) managing resources using load balancing with a central registry; and 3) managing resources using fault tolerance

methods" (See Fuller: col. 3, lines 20-37 where indexing and distributing of video across an enterprise is a pervasive and fault tolerant video solution).

As per claim 48, Fuller further teaches **at least one of**:
"1) configuring a content processing engine; 2) reconfiguring said content processing engine; and 3) reconfiguring said content processing engine in real-time" (See Fuller: Fig. 3 and col. 7, lines 30-41 where cataloger is configured with protocol translator).

As per claim 49, Fuller further teaches "c) storing said metadata" (See Fuller: col. 18, lines 32-34 where metadata may require separate storage).

As per claim 50, Fuller further teaches "c) managing assets wherein said assets include **at least one of** said content and said metadata" (See col. 3, lines 20-37 where indexing and distributing of video across an enterprise is a pervasive and fault tolerant video assets of content and its metadata).

As per claim 51, Fuller further teaches **at least one of**: "1) receiving a search query; 2) displaying results of said search query; and 3) creating products from said results" (See Fuller: Fig. 17 and col. 16, lines 49-53 where extracted metadata output in HTML form is displayed).

As per claim 52, Fuller further teaches "i) receiving a search query based on query terms" (See Fuller: col. 3, lines 58-67 where metadata of content is extracted for downstream applications, including search and browse).

As per claim 53, Fuller further teaches "a content processing engine, wherein said content processing
engine is platform independent and written in an extensible object oriented programming language" (See Fuller: col. 3, lines 55-61 where content analysis engines are available from third parties within an extensible metadata engine framework).

As per claim 54, Fuller further teaches **at least one of**:
"1) correlating results of said data extractions intelligently from multiple input streams; 2) running multiple instances of said engine concurrently; 3) performing triggered event processing; and 4) maintaining a central registry listing availability and location of plugins" (See Fuller: Fig. 6 and col. 9, lines 30-38 where a set of key frames are intelligently extracted).

As per claim 55, Fuller further teaches scripted language comprises **at least one of**:
"1) an extensible markup language; 2) an embedded language; 3) a command line based language; and 4) event handling via said scripting language" (See Fuller: col. 6, lines 50-56 where metadata server contains HTML files for supporting media management).

As per claim 56, Fuller further teaches the machine accessible medium according to claim 1, wherein said method further comprises: "c) displaying said metadata via an user interface" (See Fig. 17 and col. 16, lines 49-53 where extracted metadata output in HTML form is displayed using client browser, an user interface).

As per claim 57, Fuller further teaches clipping said content comprising **at least one of**:

"1) segmenting said content; and 2) marking a beginning and an ending of a plurality of key frames" (See Fuller: col. 3, lines 34-37 where any segment of medium content is accessed via frame accurate-index of metadata).

As per claim 58, Fuller further teaches the machine accessible medium according to claim 1, "wherein said content is **at least one of** intelligence industry content, law enforcement industry content, broadcast studio content, media asset management content, media and entertainment content, homeland defense content, distance learning content,

security content, and business intelligence content" (See col. 3, lines 48-52 where multimedia cataloger accesses and distributes media for distance learning content).

Conclusion

10. The prior art made of record

A. U.S. Patent No. 6,877,134

B. U.S. Patent No. 6,721,488

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

C. U.S. Patent Application 2003/0131076

D. U.S. Patent No. 6,937,814

E. U.S. Patent Application 2002/0169926

Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone pre unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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